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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/623,374

07/18/2003

Phillip E. Cochran

COH 303

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03/21/2005

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EXAMINER

YUN, JURIE

ART UNIT

PAPER NUMBER

2882

DATE MAILED: 03/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Etc

Office Action Summary

Application No.

10/623,374

Applicant(s)

COCHRAN, PHILLIP E.

Examiner

Jurie Yun

Art Unit

2882

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 January 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 2-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 2-5, 12, 14-25, 33 and 34 is/are rejected.
- 7) ☒ Claim(s) 6-11, 13, 26-32 and 35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. The amendment filed 1/18/05 has been entered.
2. The indicated allowability of claims 2-13 and 18-22 is withdrawn in view of the newly discovered reference(s) to Riesenfeld (USPN 2,285,943). Rejections based on the newly cited reference(s) follow.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 2-5, 12, 14-25, 33, and 34 are rejected under 35 U.S.C. 103(a) as being unpatentable over Riesenfeld (USPN 2,285,943) in view of Updegrave (USPN 3,473,026).
5. With respect to claims 2-5 and 14, Riesenfeld discloses an instrument for aligning an x-ray beam relative to an x-ray film and a target tooth of a patient to produce dental radiographs in accordance with the bisecting-angle technique, wherein the instrument is configured to align a longitudinal axis of the x-ray beam orthogonal to a bisecting plane lying approximately midway between a target plane defined by the target tooth and an x-ray film plane defined by the x-ray film (26), comprising: a first handle (11) selectively orientable at a first known angle relative to the x-ray film plane, and a second handle (10) selectively orientable at a second known angle relative to the

target plane, and wherein orientation of the handles is correlated to alignment of the longitudinal axis of the x-ray beam (columns 1-4).

Riesenfeld also discloses the first handle (11) is orientable parallel to the x-ray film plane, and wherein the second handle (10) is orientable coincident with the target plane. The second handle is pivotally attached (via pivot point, 13) to the first handle to form a variable angle between the handles to selectively orient the second handle parallel to the target plane.

Riesenfeld does not disclose the x-ray beam is collimated, and the patient is an animal. Updegrave discloses a collimator (x-ray unit nose cone, 46). It would have been obvious to one of ordinary skill in the art at the time the invention was made to use a collimator in the Riesenfeld device to produce a collimated X-ray beam, to facilitate directing of the x-rays towards the target tooth, thus preventing scatter x-rays and resulting in a better image. It also would have been obvious to one of ordinary skill in the art at the time the invention was made to use the Riesenfeld device for an animal patient because they have teeth.

6. With respect to claims 12, 20, and 21, Riesenfeld does not disclose the first handle is attachable to a film holder configured to selectively hold the x-ray film against the target tooth. Riesenfeld discloses the first handle (11) holds the x-ray film (26) against the target tooth. It would have been obvious to one of ordinary skill in the art at the time the invention was made to use an attachable film holder in the Riesenfeld device to ensure the x-ray film is secured in position. In re claim 21, Riesenfeld

discloses orienting the second handle (10) with the target plane includes pivoting (via pivot point, 13) the second handle relative to the first handle (11).

7. With respect to claims 15-19, Riesenfeld discloses wherein the steps of orienting the first handle (11) and second handle (10) further orient a reference portion (12) of the alignment instrument at a known reference angle (orthogonal) relative to the bisecting plane (23), and wherein the reference portion (12) is configured to align the longitudinal axis of the x-ray beam at an alignment angle relative to the reference portion and correlated to the reference angle, wherein the reference angle is substantially a right angle and the alignment angle is substantially zero. Likewise, when the reference angle is substantially zero, the alignment angle would be a right angle. The Riesenfeld device is configured such that the aligning rod (12) is always orthogonal to the bisecting plane (23). In re claim 18, the alignment angle is equal to 90 degrees minus the reference angle. In re claim 19, the first handle (11) of the instrument is oriented substantially parallel to the x-ray film plane and the second handle (10) of the instrument is oriented substantially parallel to the target plane.

8. With respect to claims 22 and 25, Riesenfeld discloses wherein orienting the second handle (10) includes placing a guiding member (18) attached to the second handle against the target tooth, and orienting the guiding member to point in a desired direction with respect to the tooth, wherein the guiding member is selectively extendable along an axis of the second handle.

9. With respect to claim 23, Riesenfeld discloses the reference portion (12) is configured to align an x-ray head targeting ring parallel to the bisecting plane (23).

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Although a targeting ring is not shown in the figure, it would have been obvious to one of ordinary skill in the art that the targeting ring would be parallel to the bisecting plane. The reference portion (12) is configured to always be orthogonal to the bisecting plane.

10. With respect to claim 24, Riesenfeld does not specifically disclose holding the x-ray film in place with a compressive force communicated from one or more non-target teeth through a connecting member to the x-ray film. However, it is obvious that this is done. The x-ray film (26) is held in place with a compressive force communicated from one or more non-target teeth through a connecting member (21) to the x-ray film.

11. With respect to claims 33 and 34, Riesenfeld discloses the second handle (10) further comprises a guiding member (18) configured to facilitate orientation of the second handle, wherein the guiding member is selectively extendable along an axis of the second handle.

Allowable Subject Matter

12. Claims 6-11, 13, 26-32, and 35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

13. The following is a statement of reasons for the indication of allowable subject matter: Prior art fails to disclose an instrument for aligning a collimated x-ray beam relative to an x-ray film and a target tooth of an animal patient to produce dental radiographs in accordance with the bisecting-angle technique, comprising a bisecting member attached to the handles, wherein the bisecting member is oriented substantially

parallel to the bisecting plane when the first handle is oriented parallel to the x-ray film plane and the second handle is oriented parallel to the target plane, as claimed.

Prior art fails to disclose an instrument for aligning a collimated x-ray beam relative to an x-ray film and a target tooth of an animal patient to produce dental radiographs in accordance with the bisecting-angle technique, comprising a film holder support including a first support member for selectively engaging and supporting the film holder, a second support member spaced apart from the first support member for engaging one or more non-target teeth, and a connecting member coupling the support members and allowing distance between the support members to be selectively varied and held fixed, as claimed.

Prior art fails to disclose a method of aligning an x-ray beam to produce dental radiographs of a target tooth of an animal patient in accordance with the bisecting-angle technique, comprising wherein the reference portion is a bisecting member attached to the handles, and wherein the bisecting member is oriented substantially parallel to the bisecting plane when the first handle is oriented substantially parallel to the x-ray film plane and the second handle is oriented substantially parallel to the target plane, as claimed.

Response to Arguments

14. Applicant's arguments with respect to claims 1-24 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

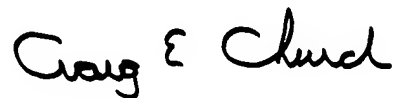
15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jurie Yun whose telephone number is 571 272-2497. The examiner can normally be reached on Monday-Friday 8:30-5:00pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Ed Glick can be reached on 571 272-2490. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Jurie Yun
March 8, 2005



Craig E. Church
Primary Examiner